APPENDIX K

Archaeological Monitoring Report

ARCHAEOLOGICAL MONITORING PROGRAM SYNOPSIS
DREDGING CONSTRUCTION SEASON 2
(JANUARY TO MARCH 2014)

Duwamish Sediment Other Area and Southwest Bank
Corrective Measure and Habitat Project
Boeing Plant 2
Seattle/Tukwila, Washington

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AMEC Environment & Infrastructure, Inc. (AMEC) was retained by The Boeing Company (Boeing) to develop an Archaeological Monitoring Program (AMEC et al., 2012a) for use on the Boeing Plant 2 Duwamish Sediment Other Area (DSOA) Corrective Measure and Habitat Project located along the Duwamish Waterway in Seattle, Washington (**Figure 1**). This synopsis presents the results of AMEC's archaeological monitoring work for the second dredge construction season along the Duwamish Waterway that was conducted during January and February 2014 (**Figure 2**). For additional project details, please refer to the Final Design Report (AMEC et al., 2012b), the Archaeological Monitoring Program Synopsis Construction Season 1 report from the 2012–2013 construction season (AMEC et al., 2013) and the shoreline construction report (AMEC and FSI, 2014).

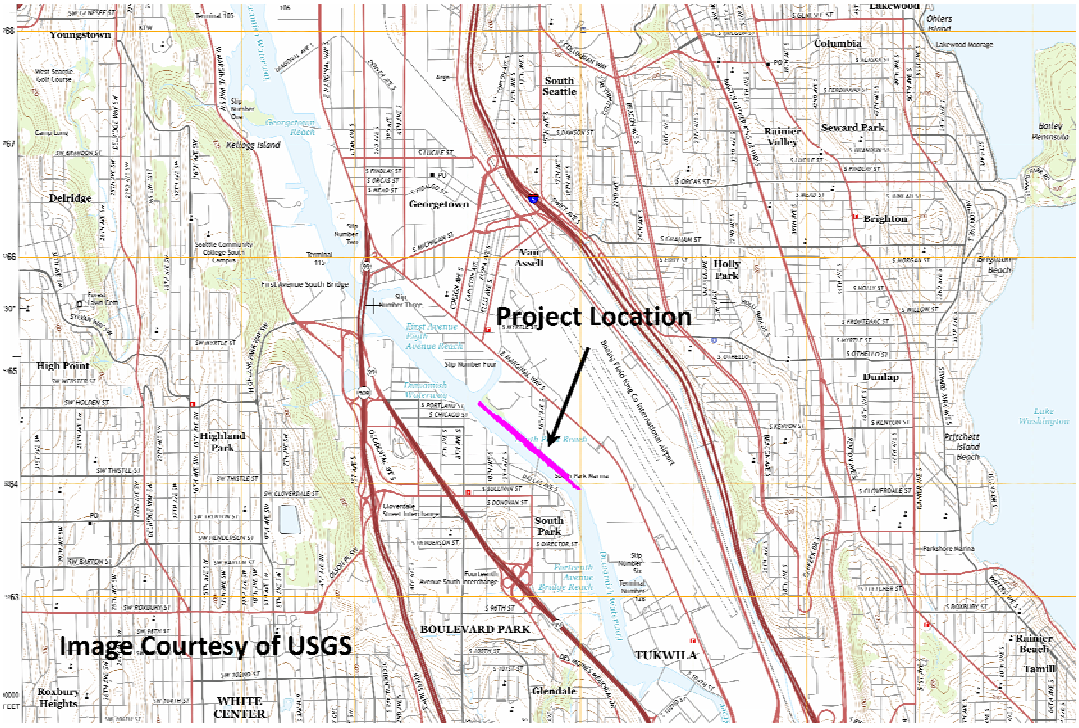

Figure 1 Project Vicinity Map

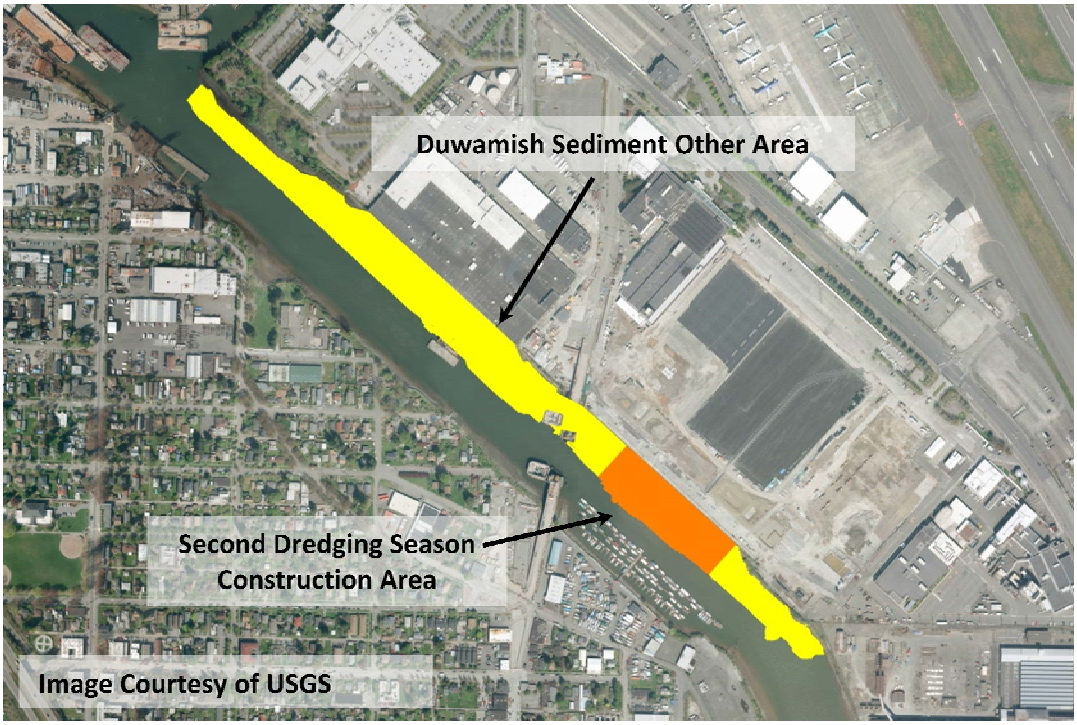

Figure 2 Location of Dredging Activities along Duwamish Waterway

1.0 ARCHAEOLOGICAL MONITORING PROGRAM

Under the Archaeological Monitoring Program, AMEC prepared an archaeological monitoring plan (AMP; AMEC et al., 2012a) for use during the project's government-to-government consultation process. For this project, the U.S. Environmental Protection Agency (EPA) is considered the lead Federal agency and is ultimately responsible for all formal consultation with participating agencies and Native American tribes. EPA forwarded the AMP to the Muckleshoot Indian Tribe, Suquamish Tribes, and Duwamish Tribe for review and comments.

Prior to Construction Season 1, AMEC followed up EPA's formal consultation effort with informal project coordination meetings with each tribe separately. At these coordination meetings, which included AMEC personnel and cultural resources representatives from each tribe, the proposed project and AMP were discussed in detail. A key point for discussion during these meetings was the proposed development of an archaeological training video by AMEC that would be shown to all on-site construction personnel in order to assist with the identification of significant cultural resources. All on-site construction personnel were trained by viewing an archaeological training video that introduced a wide range of cultural resources that could be uncovered during construction excavation or dredging. During these training meetings, the appropriate chain of communication was established

and contact information was disseminated to the construction personnel in the event of an inadvertent discovery. Also discussed were the legal aspects of artifact discovery and disclosure laws.

In addition to detailing the development of an archaeological training video, the AMP presented the modus operandi for when a professional archaeologist would be on site for archaeological monitoring activities during dredging and/or sediment removal operations. This included having a HAZWOPER-certified archaeologist on-call in the event of a discovery, spot checking areas of the project that maintained a higher probability for unknown cultural resources, and random inspections of the project.

Archaeological monitoring results from Construction Season 1 were reported in AMEC et al. (2013). During the first season, one historic period isolate find (wagon wheel) was recorded. The historic wagon wheel, which was documented with the State of Washington Department of Archaeology and Historic Preservation (DAHP) as site 45KI1142, was identified during dredge operations along the Southwest Bank of the Duwamish Waterway. No other historic objects were found in association with the wagon wheel. Site 45KI1142 was recommended not eligible for listing in the National Register of Historic Places (NRHP) as it was unlikely to yield information important to the history of the area.

Archaeological monitoring results from the shoreline construction conducted in 2013 were reported by AMEC and FSI (2014). No archaeological sites or isolate finds were documented during monitoring efforts for the shoreline construction, although construction activities and monitoring did uncover concrete debris, discarded building material (e.g., wood fragments), metal rebar, abandoned wooden piers, modern refuse, and one metal sign of an unknown age.

2.0 ARCHAEOLOGICAL TRAINING VIDEO

A copy of the archaeological training video was made available to all on-site construction personnel conducting dredging operations during January and February 2014. Any new on-site construction personnel that did not participate in the original 2012 and 2013 archaeological training video sessions were required to watch the training video prior to carrying out any work. AMEC archaeologist Jason Cooper presented the archaeological training video in December 2013 to over 60 on-site construction personnel. This latest round of training was in preparation for on-site personnel conducting dredging operations during the second dredging construction season.

3.0 RESULTS

Due to the nature of dredging of sediment from the Duwamish Waterway, the surveillance of excavated sediment was carried out by dredge oversight personnel (Dalton, Olmsted & Fuglevand, Inc.) who had gone through the archaeological training. Surveillance consisted of personnel observing the sediment coming out of each bucket that was pulled out of the Duwamish Waterway (DOF, 2014). Personnel included a dredge observer, deck hands, and water management personnel. The dredge

observer was the Design Team Field Engineer, whose job was to sit in the cab of the excavator and observe and record all dredging activities. These personnel were on site 100 percent of the time during dredging and had a clear view of the bucket and sediment barge at all times. The dredge observer also filled out a daily report that recorded minute-by-minute activities during each dredge shift, as well as any observations or notes. These reports were reviewed by an AMEC archaeologist to check for any anomalies or other observations that may have archaeological implications.

Contractor deck hands were available to assist with operations moving the sediment barges in and out and while moving the dredge. During dredge operations, they were available to observe the dredged sediment and watch for any unusual or potentially significant material. The water management personnel worked alongside the sediment barge and were responsible for managing the water in the sediment barge and observing the material that went into the barge. Along with the deck hands, the water management personnel worked alongside the perimeter of the sediment barge.

Another check in place for the archaeological surveillance was the monitoring that took place at the sediment transload facility. Loaded barges were brought to the transload facility for offloading and eventual sediment disposal. Project personnel at the transload facility were previously trained on how to recognized material that was historically or archaeologically significant. Surveillance of the offloaded material at the transload facility was carried out by the transload observer and crane spotter. The transload observer's job was to monitor all offloading activities at the facility. This individual filled out a daily report that recorded all significant activities and took pictures of the sediment barge during offloading. The crane spotter had a view of the crane bucket at all times and was instructed to notify project personnel if any unusual material was found.

No archaeological sites or isolate finds were documented during the second dredging construction season.

Photo 1 shows the view of a bucket and sediment barge from an excavator cab. **Photo 2** shows the sediment barge from its perimeter. **Photo 3** depicts water management personnel working alongside a sediment barge. **Photo 4** shows the observer and crane spotter's view of sediment barge at the transload facility during fleeting of barges at the facility dock.

Photo 1 View of bucket and sediment barge from excavator cab.

Photo 2 View of sediment barge from perimeter of barge.

Photo 3 Water management personnel working alongside sediment barge.

Photo 4 Observer and crane spotter view of sediment barge at the transload facility during fleeting of barges in January 2014.

4.0 CONCLUSIONS

The second dredging construction season was carried out between January 2 and February 25, 2014. No archaeological material was identified during archaeological monitoring and surveillance activities. AMEC presented the archaeological training video in December 2013 to all on-site construction personnel responsible for the dredge operation. AMEC will continue to work with Boeing on this project by rolling out the archaeological training for all new construction personnel and by conducting periodic site inspections during the upcoming third dredging season.

5.0 REFERENCES

AMEC Environment & Infrastructure, Inc., Dalton, Olmsted & Fuglevand, Inc., and Floyd|Snider, Inc. (AMEC et al.). 2012a. Archaeological Work Plan, Appendix G in Final Design Report, Duwamish Sediment Other Area and Southwest Bank Corrective Measure and Habitat Project, Boeing Plant 2, Seattle/Tukwila, Washington. Prepared for The Boeing Company, Seattle, Washington.

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AMEC Environment & Infrastructure, Inc. and Floyd Snider, Inc. (AMEC and FSI). 2014. Archaeological Monitoring Program Synopsis Construction Season 2, Appendix H in Shoreline Completion Report, Duwamish Sediment Other Area and Southwest Bank Corrective Measure and Habitat Project, Boeing Plant 2, Seattle/Tukwila, Washington. Prepared for The Boeing Company, Seattle, Washington.

Dalton, Olmstead & Fuglevand, Inc. (DOF). 2014. Archaeological Surveillance Overview for Construction Season 3 Dredging. Prepared by DOF, Poulsbo, Washington. Prepared for AMEC Environment & Infrastructure, Inc., Seattle, Washington.